WINNER
Smart Energie

AeroCal

AeroCal
Nanotechnologic flexible stainless steel tube for Heat Pump systems and Biomass boilers

- Stainless steel corrugated pipes (1.4404/AISI 316L), certified for domestic water use - tested BS EN ISO 10380
- Aerogels insulation of only 5,5 or 11mm
- Very Low thermal conductivity: 0,017 W/mK @ 10 °C
- Reduced size up to 1/3
- External PVC coating UV resistant
- Mechanical fast mounting fittings
- Available diameters: DN20, DN25, DN32, DN40 (up to DN200 on request)
- Max operating Temperature: +200°C
- Easy to install
- Pipes that can be directly used underground

WARRANTY 10 year WARRANTY

TÜVRheinland CERTIFIED

Also available in single tube and with larger diameters (up to DN200) on request

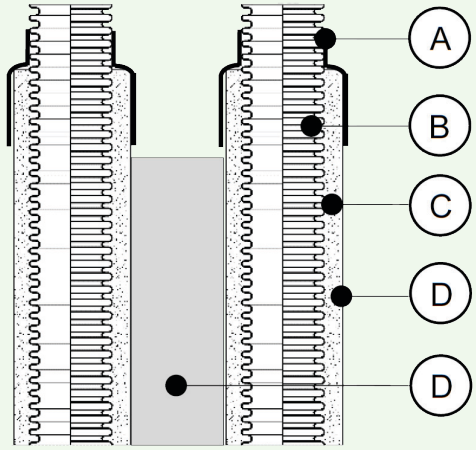
AeroCal consists of a complete system of double pre-insulated piping in stainless steel 1.4404/AISI316L (certified for domestic water use) for heat pump systems and Biomass boilers.

The insulation is made of aerogel with a particularly low thermal conductivity (0,017 W / (m - K) at an average temperature of 10 °C according to PN-EN 12667: 2002), the protective cover is made of UV-, weather- and animal-resistant PVC.
The pipes have diameters DN20, DN25, DN32 and DN40 (up to DN200 on request) and are available in grey coating color.
The thickness of the insulation is 5,5 mm or 11 mm.

AeroCal pipes can be directly used underground.

Technical Data

Models	Diameter [mm] type of pipe	Color	insulation [mm]	Spool lenght [m]
WP-AL20/6-150G	20 - AISI316L	Grey	5,5	150
WP-AL25/6-100G	25 - AISI316L	Grey	5,5	100
WP-AL32/6-80G	32 - AISI316L	Grey	5,5	80
WP-AL40/6-80G	40 - AISI316L	Grey	5,5	80
WP-AL20/11-100G	20 - AISI316L	Grey	11	100
WP-AL25/11-60G	25 - AISI316L	Grey	11	60
WP-AL32/11-50G	32 - AISI316L	Grey	11	50
WP-AL40/11-50G	40 - AISI316L	Grey	11	50



PVC COVER

thickness	0,5 mm
tensile strength	1800 N/5 cm
weight	650 g/m^2
UV resistance	very high
fire classification (EN 13501) : B1-s2, d0	

A	Heat shrink sleeve
B	Stainless steel pipe
C	Aerogel insulation
D	PVC cover

AEROGEL INSULATION

thermal conductivity coefficient (TCC) - (according to EN 12667, tav = 10°C)	0,017 W/mK
maximum application temperature	675°C
permissible collector stagnation temperature according to EN 12975-2	675°C
Hydrophobic material resistant to water and moisture; Fire classification (EN 13501): A2-s1, d0	

Characteristics

AISI316L stainless steel piping	Symbol	DN20		DN25		DN32		DN40	
Insulation thickness [mm]	ga	5,5	11	5,5	11	5,5	11	5,5	11
Pipe inner diameter [mm]	d1	20,9		25,1		32,8		40,8	
Pipe outer diameter [mm]	d2	26,4		31,8		39,6		49,8	
Tolerance [mm]	w	0,2		0,3		0,3		0,3	
Min. bending radius [mm]	Rg	30		35		40		60	
Liquid volume ±5% [dm^3/m]		0,46		0,649		1,106		1,626	
Nominal pressure according to DIN EN ISO 10380 / SF4	pmax	10		6		4		2,5	
Unit mass of pipe [kg /m]*	mjr	0,787	1,115	0,908	1,262	1,558	2,133	1,933	2,604
Thermal resistance [mK/W]*	Ri	3,54	6,06	3,03	5,29	2,50	4,47	2,01	3,66
Pipe axial distance [mm]*	L2	62,4	72,4	67,8	77,8	75,6	85,6	86,7	96,7
Pipe outer diameter [mm]*	d4	37,4	47,4	42,8	52,8	50,6	60,6	61,7	71,7

* values refer to the entire finished product: double pipe with insulation and PVC

Pressure loss table

DN20		DN25		DN32	
Pressure Drop [mbar/m]	Flow rate [LPM]	Pressure Drop [mbar/m]	Flow rate [LPM]	Pressure Drop [mbar/m]	Flow rate [LPM]
2	5,38	1	8,27	1	16,67
3	7,21	2	12,28	2	24,40
4	8,18	3	14,59	2,5	26,30
5	9,12	4	16,28	3	27,36
6	9,63	5	17,68	4	31,69
8	11,30	7	21,70	6	42,81
10	13,01	8	21,80	7	45,38
12	14,15	10	25,08	8	46,20
14	15,00	12	27,49	10	51,74
16	15,84	14	29,31	12	57,49
19	17,32	16	31,07	14	62,36
21	18,09	19	34,95	16	65,91
24	19,31	22	37,67	18	68,89
27	20,60	25	39,64	21	74,04
30	21,71	28	42,18	23	78,15
33	23,42	31	43,73	26	84,50
36	24,40	34	45,28	29	86,84

Mechanical fast mounting Fittings

						
A - Male	**B** - Female	**C** - Coupling	**D** - Cylindrical straight fitting	**E** - double straight fitting on copper	**F** - TEE fitting	**G** - Bushing (spare part)
DN12 x 1/2"	DN12 x 1/2"	DN12 x DN12	DN12 x 12 mm	DN12 x 12 mm	DN16 x 3/4"	DN12
DN12 x 3/4"	DN12 x 3/4"	DN16 x DN16	DN12 x 15 mm	DN12 x 15 mm	DN20 x 1"	DN16
DN16 x 1/2"	DN16 x 1/2"	DN20 x DN20	DN12 x 18 mm	DN12 x 22 mm*	DN25 x 1"	DN20
DN16 x 3/4"	DN16 x 3/4"	DN25 x DN25	DN16 x 22 mm	DN16 x 15 mm		DN25
DN16 x 1"	DN16 x 1"	DN32 x DN32	DN20 x 22 mm	DN16 x 22 mm*		DN32
DN20 x 3/4"	DN20 x 3/4"	DN40 x DN40	DN25 x 22 mm	DN20 x 22 mm*		DN40
DN20 x 1"	DN20 x 1"			DN25 x 22 mm*		
DN25 x 1"	DN25 x 1"			DN32 x 28mm		
DN25 x 1-1/4"	DN25 x 1-1/4"			DN40 x 35 mm		
DN32 x 1-1/4"	DN32 x 1-1/4"					
DN32 x 1-1/2"	DN32 x 1-1/2"					
DN40 x 1-1/2"	DN40 x 1-1/2"					
DN40 x 2"	DN40 x 2"					

* Reduction to copper 18mm optional. (VR-18K)

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